METHOD OF MANUFACTURING AN OPTICAL FIBER

ABSTRACT OF THE DISCLOSURE

A method of manufacturing an optical fiber using silica glass having properties changed by UV irradiation and heat treatment, which method facilitating efficient mass production of long optical fibers. A base material of silica glass is heated in a fiber spinning heating furnace, and a silica glass fiber is drawn out of the forward end of the heating furnace to be spun up. In a UV irradiation zone, UV is irradiated to the spun silica glass fiber. As a result, multiple structural defects are caused in the silica glass fiber. When the structural defects are removed by heat treatment, the average bond angle of Si-O-Si network in the silica glass increases compared with that before heat treatment, and structural relaxation proceeds to provide a structurally stable glass, in which generation of defects due to further UV irradiation is hindered. Thus, a silica glass fiber having high UV resistance is obtained.